

## **Description – USDA California Climate Hub Postdoctoral Fellow # 832801**

**Overview** - USDA's Climate Hubs are a unique collaboration across USDA agencies. The Climate Hubs link USDA research and program agencies in their regional delivery of timely and authoritative tools and information to agricultural producers and professionals. They are led by Agricultural Research Service and Forest Service Senior Directors located at ten regional locations, with contributions from many other programs including the Natural Resources Conservation Service, Farm Service Agency, Animal and Plant Health Inspection Service, and the Risk Management Agency.

**Position Summary** - The USDA California Climate Hub in partnership with The John Muir Institute of the Environment at UC Davis have an opening for a Postdoctoral Fellow in climate and water use in perennial crops. This is a two-year position housed at the John Muir Institute of the Environment at UC Davis, Davis CA. The successful candidate will work with a diverse team of researchers at USDA Climate Hubs, Agricultural Research Service, UC Davis, and Lawrence Berkeley National Laboratory. The candidate is expected to participate as a staff member of the USDA Climate Hub network and interact and participate with Others in the Climate Hub network.

**Salary/Benefits** - Annual salary starts at \$52,140 depending on experience for 12 months at 100% time with the possibility of an additional 12-month extension (2 years in total). The position includes salary and benefits commensurate with experience and demonstrated scholarly accomplishment. The position will receive full benefits along with 24 days of Personal Time Off (PTO) and 12 days of Sick Leave (SKL) per year. PTO must be used by the end of the appointment, as it does not carry forward should a reappointment for additional extended time be granted.

**The Challenge** - California is leading the world in production and export of agricultural products from the perennial specialty crop industry. At the same time, the state is expected to experience projected increased temperatures by mid- and end century and more limited access to water, which may reduce the maximum temperatures that different crops can tolerate. These factors likely will influence where in the State these crops can be grown. Understanding the resultant balance among climatically induced stressors, physiological water stress tolerance and associated adaptive capacity will be critically important for the specialty crop industry and water management districts and municipalities.

The postdoc will examine interactions between climate change, physiological drought tolerance/water use efficiency and agricultural management to address water management and climate adaptation approaches for woody perennial crops under expected mid- to end-century temperature and climatic conditions. The successful candidate is expected to investigate individual plant to ecosystem responses in perennial cropping systems to modeled temperature and precipitation projections, and incorporate drought stress and/or tolerance into model projections to improve irrigation management and adaptation practices and measures. The project goals are to inform crop type by location (site) investments related to the implementation of the Sustainable Groundwater Management Act (SGMA), inform regional irrigation districts for design management/water delivery plans, as well as to produce work publishable in

traditional academic journals. Specific research will be modified depending upon the candidate's training and interests.

The ideal candidate will possess excellent written and oral communication skills, professional and interpersonal skills and capacity to meaningfully contribute intellectually as part of a large interdisciplinary team. In addition, the successful candidate will have the demonstrated capacity to integrate a variety of climate, ecosystem, and plant models and associated geospatial modeling competences. Relevant experience includes hydrology, agricultural science, GIS, modeling (climate, ecosystem, and/or plant), and/or remote sensing. Further, the successful candidate will work with a diverse team of researchers, scientists and extension specialists including Dr. Steven Ostoja, director at the USDA California Climate Hub; Drs. Kerri Steenwerth, research soil scientist, Emile Elias, research hydrologist and Andrew McElrone, research plant physiologist at the Agricultural Research Service; Dr. Alison Marklein, research scientist at Lawrence Berkeley National Laboratory and Dr. Tapan Pathak, agriculture climate adaptation specialist at University of California, Merced.

**Application must include the following:**

- A cover letter introducing yourself (e.g. experience, potential research interests, and general career goals), delineate all technical skills you have that are relevant to this position.
- Either a Curriculum Vitae or Resume are acceptable, listing all technical skills.
- Copies of transcripts (unofficial acceptable)
- A list of publications and presentations – including one first authored peer review paper as a writing example.
- Provide contact information for three references whom we can contact regarding your application.

**Qualifications**

- PhD in the agricultural, crop or plant sciences, crop or plant modeling, ecology/environmental science, applied mathematics or computational science or closely related field.
- Research experience and knowledge in computing and/or code development ideally for agricultural science applications, and skills to integrate a variety of climate, ecosystem, and plant models.
- Demonstrated experience with research in the field of applied ecology, including hydrology, agricultural science, GIS, modeling (climate, ecosystem, and/or plant), and remote sensing.
- Excellent written and oral communication skills and a record of scientific publications in the field of agricultural science, ecology and/or environmental biology.
- Ability to work productively both independently and as part of an interdisciplinary team balancing divergent objectives involving research and code development.

Send your completed application package as a single PDF to [steven.ostoja@ars.usda.gov](mailto:steven.ostoja@ars.usda.gov) AND [smostoja@ucdavis.edu](mailto:smostoja@ucdavis.edu) with **Climate and Water Modeling Postdoc** in the subject line by Dec 15, 2017 by midnight to receive full consideration.